

ABSTRACT

A high reliability gas mixture backup system and method using same are disclosed herein comprising a high pressure gas mixture storage system and a cryogenic liquid blending gas mixture generation system. In one embodiment the high pressure gas mixture storage system provides instantaneous delivery of a precise gas mixture for a short duration of time, and the cryogenic liquid blending gas mixture generation system provides delivery of a precise gas mixture for an extended duration of time, wherein the backup system provides a large volume of a precise mixture of the gas mixture substantially instantly and then for extended periods of time, with high reliability.